Mr. Ken Gillespie
ESSROC Cement Corporation
S.R. 25 South, 3084 West C.R. 225 South
Logansport, IN 46947

Re: Significant Source Modification No:
017-11593-00005

Dear Mr. Gillespie:

ESSROC Cement Corporation applied for a Part 70 operating permit on June 3, 1996 for the cement plant. An application to modify the source was received on November 24, 1999. Pursuant to 326 IAC 2-7-10.5 the installation of new low-NOx burners on two existing cement kilns is approved for construction and operation at the source.

The Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Nisha Sizemore or extension 2-8356, or dial (317) 232-8356.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
nls
cc: File - Cass County
U.S. EPA, Region V
Cass County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT

ESSROC Cement Corporation
S.R. 25 South, 3084 West C.R. 225 South
Logansport, Indiana 46947

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 017-11593-00005	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates stationary cement plant.

Responsible Official:	Ken Gillespie
Source Address:	S.R. 25 South, 3084 West C.R. 225 South, Logansport, IN 46947
Mailing Address:	S.R. 25 South, 3084 West C.R. 225 South, Logansport, IN 46947
Phone Number:	Brian Graf: (219) 753-5121
SIC Code:	3241
County Location:	Cass
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of the 28 listed source categories pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate a new low-NOx burner in each of the following existing emission units and pollution control devices:

(a) One (1) coke, coal, and/or supplemental fuel wet kiln #1, identified as EU401, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401.

(b) One (1) coke, coal, and/or supplemental fuel wet kiln #2, identified as EU413, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #2), identified as CE405, and exhausting to one (1) stack, identified as EP401.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22); and

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM, . IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management

100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.7 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.8 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.9 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.10 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management

Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(c) Unless otherwise specified in this approval, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

a new low-NOx burner in each of the following existing emission units and pollution control devices:

(a) One (1) coke, coal, and/or supplemental fuel wet kiln #1, identified as EU401, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401.

(b) One (1) coke, coal, and/or supplemental fuel wet kiln #2, identified as EU413, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #2), identified as CE405, and exhausting to one (1) stack, identified as EP401.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Pollution Control Project Exclusion [40 CFR 52.21]

The installation and operation of the two low-NOx burners meets the criteria as set forth in U.S. EPA's 1994 memorandum titled, "Pollution Control Projects and New Source Review (NSR) Applicability" and its attachment, "Guidance on Excluding Pollution Control Projects from Major New Source Review." Meeting this criteria renders the installation and operation of the the low-NOx burners exempt from the requirements of 40 CFR 52.21.

D.1.2 Variance [326 IAC 2-2]

Installation of the LNBs will require a lengthy kiln outage. Essroc originally intended to install the LNBs and related equipment during a regularly scheduled shutdown during winter 2000, but the shutdown could be delayed until April or May 2000 if needed. Requiring the pollution control project to undergo review under state PSD rules would delay the project beyond these dates. This delay would constitute an undue hardship or burden on Essroc with absolutely no additional environmental benefit. Thus, a variance from 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) is approved. This variance does not affect other State or Federally approved SIP requirements.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: ESSROC Cement Corporation
Source Address: S.R. 25 South, 3084 West C.R. 225 South, Logansport, Indiana 46947
Mailing Address: S.R. 25 South, 3084 West C.R. 225 South, Logansport, Indiana 46947
Source Modification No.: 017-11593-00005

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Significant Source Modification
to a Part 70 Operating Permit

Source Name:	ESSROC Cement Corporation
Source Location:	S.R. 25 South, 3084 West C.R. 225 South, Logansport, Indiana 46947
County:	Cass
SIC Code:	3241
Operation Permit No.:	T017-6033-00005
Operation Permit Issuance Date:	not yet issued
Significant Source Modification No.:	017-11593-00005
Permit Reviewer:	Nisha Sizemore

On January 9, 2000, the Office of Air Management (OAM) had a notice published in the New Sun, Kendallville, Indiana, stating that ESSROC Cement Corporation had applied for a significant source modification to a Part 70 Operating Permit to install new low-NOx burners in their existing kilns. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 1, 2000, Mary Moriarty submitted comments on the proposed significant source modification to the Part 70 permit. The summary of the comments is as follows:

Comment

Because cement kilns burning hazardous waste emit dioxin, a known carcinogen that affects reproductive, endocrine, and immune systems and can act as an endocrine disrupter, I am concerned about the health consequences of such emissions. Cass County, in which ESSROC is located, has higher than average cancer rates. I have had breast cancer since moving to Logansport. Because there was no original risk assessment prior to burning, there is unknown potential for harmful effects on the air, water, and ground around ESSROC. I have enclosed a physician's statement from Texas addressing health concerns about cement kiln burning of hazardous waste in particular in their area and in general. I understand that by installing a new burner now, ESSROC will be able to evade the stringent analysis requirements of coming EPA regulations. Will the proposed burner replacement meet the coming requirements? Is the intent of the EPA regulations to permit exceptions? Because the trial burn period issued by EPA has not been completed, will the proposed burner satisfy those requirements?

Public safety becomes a concern when the company is allowed to avoid both a risk assessment and future scrutiny. I think it prudent to refuse ESSROC's petition and instead enforce the provisions of the coming EPA regulations requiring ESSROC to obtain the analysis and data that would answer the questions of public safety.

Response

The Office of Air Management (OAM) routinely performs air quality analyses to insure that issuance of a permit will not result in a violation of any state or federal air regulations and standards. A permit would be denied if the application does not meet the requirement of 326 IAC 2 or if the source would pose a threat to public health. No significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility.

The installation of the new burners and the issuance of this exemption does not exempt ESSROC from complying with any of the coming EPA regulations. This exemption only exempts ESSROC from the

Prevention of Significant Deterioration requirements in order to install new low-NOx burners in their existing kilns. The reason that the exemption is being issued is because the new low-NOx burners are expected to cause a decrease in NOx emissions from the kilns. This project is considered a pollution control project since it is expected to cause a decrease in NOx emissions from the kilns. EPA regulations already provide exemptions for pollution control projects. Indiana does not currently have regulations exempting pollution control projects; however, such regulations have been proposed. Since Indiana does not currently have regulations exempting pollution control projects, ESSROC needed to apply for a variance. The kilns at ESSROC will still be required to comply with all other existing regulations.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	ESSROC Cement Corporation
Source Location:	S.R. 25 South, 3084 West C.R. 225 South, Logansport, Indiana 46947
County:	Cass
SIC Code:	3241
Operation Permit No.:	T017-6033-00005
Operation Permit Issuance Date:	not yet issued
Significant Source Modification No.:	017-11593-00005
Permit Reviewer:	Nisha Sizemore

The Office of Air Management (OAM) has reviewed a modification application from ESSROC Cement Corporation relating to the installation of a low-NOx burner in the following existing emission units and pollution control devices:

(a) One (1) coke, coal, and/or supplemental fuel wet kiln #1, identified as EU401, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401.

(b) One (1) coke, coal, and/or supplemental fuel wet kiln #2, identified as EU413, constructed in 1962, with a heat input capacity of 243 million Btu per hour, with a maximum production rate of 42 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP #2), identified as CE405, and exhausting to one (1) stack, identified as EP401.

Detailed Project Description

On November 24, 1999, ESSROC Cement Corporation submitted an application to the OAM requesting to install low NOx burners and necessary ancillary equipment, including semi-direct firing systems, at its Logansport cement plant. The project anticipates the requirements likely to be imposed on cement kilns as a result of EPA's NOx SIP Call. The installation of the low NOx burners is anticipated to reduce NOx emissions from the kilns by 5-30%, and ESSROC has calculated that emissions of other pollutants from the kilns should remain constant or even decrease as a result of the change.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 24, 1999.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (9 pages).

Collateral Emission Increases

Because the new burner is more efficient than the old one, the kiln's production rate could increase slightly; further, because the system improves combustion control, ESSROC may experience a reduction in down time, thereby allowing a small, but unquantifiable, increase in its hours of operation. These potential effects may result in a small increase in actual emission of particulate matter plant wide as a result of increased clinker production. ESSROC has calculated that clinker production could potentially increase by up to 1.5% once the low NOx burner is installed.

Pollutant	Potential To Emit (tons/year)
PM	374
PM-10	266
SO_2	0.0
VOC	0.0
CO	0.0
NO_x	0.0

If the emission increase is calculated by taking future potential emissions minus past actual emissions, the following potential to emit rates are determined:

Pollutant	Future Potential (tons/year)	Past Actual (tons/year)	Potential to Emit (Future Potential minus Past Actual) (tons/year)
PM	456	374	82
PM-10	325	266	59
SO_2	1829	1829	0.0
VOC	64	64	0.0
CO	1800	1800	0.0
NO_x	1567	1650	5-30% reduction expected

If the emission increase is calculated by taking future actual emissions* minus past actual emissions, the following potential to emit rates are determined:

Pollutant	Future Actual (tons/year)	Past Actual (tons/year)	Potential to Emit (Future Actual minus Past Actual) (tons/year)
PM	382	374	8.0
PM-10	271.5	266	5.5
SO_2	1829	1829	0.0
VOC	64	64	0.0
CO	1800	1800	0.0
NO_x	1567	1650	5%-30% reduction expected

*Note: Future actual emissions can be determined because the installation of the low-NOx burner will not affect the method of operation of the kiln.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4), any modification with a potential to emit greater than or equal to twenty-five (25) tons per year of PM or PM10. This approval allows the source to construct and operate, since the Title V permit has not yet been issued.

County Attainment Status

The source is located in Cass County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Cass County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Cass County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	greater than 250
VOC	less than 250
CO	greater than 250
NOx	greater than 250

(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

(b) These emissions are based upon the 1998 emission statement.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
increase in emissions from cement kilns #1 and #2	450	321	0.0	0.0	0.0	0.0	0.0
PSD significance levels	25	15	40	40	100	40	10 and 25

This modification to an existing major stationary source would be considered major pursuant to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 40 CFR 52.21; however the source has applied for a variance from 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and a Pollution Control Exclusion from 40 CFR 52.21. See Appendix B.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326

IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - cement kiln

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The installation of the low-NOx burners is not subject to the requirements of 326 IAC 2-2 and 40 CFR 52.21(PSD) because ESSROC has applied for a variance from 326 IAC 2-2 and a pollution control project exclusion from 40 CFR 52.21.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this modification.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 017-11593-00005.

Mr. Ken Gillespie
ESSROC Materials, Inc.
S.R. 25 South, 3084 West C.R. 225 South
Logansport, Indiana 46947

Re: Variance under IC 13-14-8-8
and Pollution Control Project Exclusion

Dear Mr. Gillespie:

On July 29, 1999, a request was submitted to the Indiana Department of Environmental Management (IDEM) on behalf of Essroc Cement Corporation (Essroc) for a pollution control project exclusion from 40 CFR 52.21 and 326 IAC 2-2. Specifically, Essroc seeks a determination that its proposed project qualifies as a pollution control project exclusion from major New Source Review (NSR).

On November 8, 1999, a request was submitted to IDEM on behalf of Essroc for a variance under IC 13-14-8-8 from 326 IAC 2-2. Specifically, Essroc seeks the variance under IC 13-14-8-8 for the installation of a pollution control project at its Logansport, Indiana facility. The commissioner may also grant a request for a variance if she determines that immediate compliance with the rule would "impose an undue hardship or burden upon the applicant."

Based on the facts set forth in this letter and for the reasons set out below, IDEM hereby grants Essroc's request for a pollution control project exclusion from 40 CFR 52.21 and a variance under IC 13-14-8-8 from 326 IAC 2-2.

Background

Essroc owns and operates six (6) cement plants located in Indiana, Maryland, and Pennsylvania. These states and the plants within the states had been included in U.S. EPA's nitrogen oxide SIP Call that would require the reduction of nitrogen oxides (NO_x) from cement kilns. NO_x reduction technology would have to be installed and operated by May 2003. The SIP Call is currently under litigation and the D.C. Circuit Court of Appeals has granted a stay of the date for states to respond with revised state implementation plans. However should the SIP Call be upheld, the NO_x reductions will have to be implemented.

Essroc has thirteen (13) kilns, eleven (11) of which would require additional controls if the SIP Call were to be implemented to achieve the necessary emissions reductions. Essroc wants to modify the direct coal firing systems at its Logansport, Indiana facility now, on a voluntary basis, to accommodate a low NO_x burner (LNB) that will allow Essroc to achieve the emissions reductions as well as gain experience with this technology for future use in other kilns.

The federal (40 CFR 52.21) and state (326 IAC 2-2) prevention of significant deterioration (PSD) rules govern what is required when major modifications are implemented at existing major sources. These rules are triggered where the proposed source modification would result in a significant increase in emissions. In many cases the installation of a pollution control project does not result in an increase in emissions, but in some cases the pollution control project will result in a collateral increase in emissions. Under the federal rules, U.S. EPA has addressed this situation and has an exclusion for pollution control projects at utility plants. U.S. EPA has also issued guidance allowing an exclusion at other sources as long as specific criteria and safeguards are met. The exclusion can be allowed as long as the permitting

authority (IDEM) determines that the project is environmentally beneficial, there is no adverse impact to air quality, and the public is given notice and opportunity to comment on the determination. Indiana's rules do not include the exclusion and IDEM has not published or issued similar guidance, although IDEM has initiated a rulemaking that would incorporate the pollution control projection exclusion in the state PSD rules.

Pollution Control Project Exclusion

Essroc offers the following points in support of its request for a pollution control project exclusion from 40 CFR 52.21 (federal PSD) pursuant to federal guidance:

1. Semi-direct or indirect firing systems with LNBs are generally applied to new or modified units to reduce NO_x emissions and to improve combustion control. The U.S. EPA guidance documents specifically states that LNBs are appropriate candidates for a case-by-case exclusion from PSD requirements. Furthermore, the guidance states that "the types of pollution control projects listed in III.A.1. above can be presumed, by their nature, to be environmentally beneficial." The pollution control projects in III.A.1. of the guidance document includes LNBs. In addition, in U.S. EPA's NO_x SIP call and the associated proposed federal implementation plan, U.S. EPA suggested LNBs as an acceptable control technology for compliance with the rules. Clearly, the installation of a LNB on a cement kiln qualifies as an environmentally beneficial project.

2. Using a past actual to future potential analysis to determine whether a significant net emissions increase will occur would result in this project being required to undergo PSD review. However, the actual capacity of the kilns are not expected to increase as a result of the installation of a LNB.

3. The installation of a LNB should reduce the actual NO_x emissions by an estimated five to thirty percent (5% - 30%). In addition, actual particulate and lead emissions from the kilns are expected to decrease and actual SO_2, CO, and VOC emissions from the kilns are expected to remain the same.

4. Any possible collateral actual emissions increases are small, are below PSD thresholds, and should not cause or contribute to a violation of the NAAQS, the PSD increment, or adversely affect visibility or other air quality related value. The installation of the LNBs is expected to decrease fuel consumption. In order to maintain system equilibrium, the operators will not reduce fuel usage, but will slightly increase the feed rate to the kilns. If the feed rate is increased and production increased, there may be increases of actual emissions from other areas of the plant. However, worst case estimates indicate that the collateral increase in actual particulate emissions would only be eight (8) tons per year for total particulates and five and one-half (5.5) tons per year for PM_{10}.

5. The plant is located in an area which is in attainment with all regulated NAAQS pollutants. Because the collateral actual emissions increase is not significant under NSR, there is no reason to believe that the project would cause or contribute to a violation of the NAAQS, the PSD increment, or adversely affect visibility or other air quality related value.

Variance Request

Essroc offers all of the above points and the following in support of its variance request:

1. The primary intended purpose of the state's PSD rules (326 IAC 2-2) is to implement the federal PSD program.

2. Installation of the LNBs will require a lengthy kiln outage. Essroc originally intended to install the LNBs and related equipment during a regularly scheduled shutdown during winter 2000, but the shutdown could be delayed until April or May 2000 if needed. Requiring the pollution control project to undergo review under state PSD rules would delay the project beyond these dates. This delay would constitute an undue hardship or burden on Essroc with absolutely no additional environmental benefit.

Findings

IDEM, as the delegated authority for implementing the federal PSD program, may grant a pollution control project exclusion for projects that it determines are environmentally beneficial and would not violate NAAQS, increment consumption, or otherwise adversely affect air quality.
The commissioner may also grant a request for a variance if she determines that immediate compliance with the rule would "impose an undue hardship or burden upon the applicant." IC 13-14-8-8. Based on the department's review and analysis of the information provided by Essroc, IDEM makes the following findings:

1. The installation of the LNBs at the Essroc, Logansport, Indiana facility is a pollution control project that meets the criteria as set forth in U.S. EPA's 1994 memorandum titled, "Pollution Control Projects and New Source Review (NSR) Applicability" and its attachment, "Guidance on Excluding Pollution Control Projects from Major New Source Review."

2. The installation of LNBs will reduce the emissions of nitrogen oxides, an ozone precursor, and will not result in significant collateral increases in actual emissions of other regulated pollutants.

3. Requiring the pollution control project to be reviewed under state PSD rules and issuance of a PSD modification permit will result in an undue burden without environmental benefit and would, in fact, delay the environmental benefit that will be achieved from installation of the LNBs. NOx is one of the key contributors to ozone formation and Indiana is currently developing a rule to reduce these emissions from certain facilities throughout the state. Reductions in NOx emissions from Essroc will contribute to improved air quality.

4. The pollution control project exclusion and the variance are solely for the PSD requirements found in 40 CFR 52.21 and 326 IAC 2-2, respectively. This exclusion and variance do not affect other applicable state rules or federally approved SIP requirements.

5. Essroc will conduct stack tests on both kilns for NOx emissions, both before and after the installation of the LNBs, in accordance with 326 IAC 3-6 (Source Sampling Procedures), utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

Therefore, IDEM hereby grants the requested pollution control project exclusion and variance. The variance from state law requirements (326 IAC 2-2) would be granted for a one (1) year period, effective upon issuance, and would not change federally approved SIP requirements. The department has commenced rulemaking to request that the Air Pollution Control Board amend 326 IAC 2-2-1 to be consistent with this variance and allow for the exclusion of environmentally beneficial pollution control projects from state PSD requirements.

Sincerely,

Janet G. McCabe, Assistant Commissioner
Office of Air Management

Attachments
nls
cc: File - Cass County
U.S. EPA, Region V
Cass County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner
Air Programs - Kathryn Watson
Rule Development - Roger Letterman
Office of Legal Counsel - Loraine Seyfried
Permit Review - Nisha Sizemore